

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1-40 (Canceled)

41. (Currently Amended) A method of therapeutically treating a patient suffering from Parkinson's disease, the method comprising administering to the patient an effective regime of an agent that induces an immunogenic response against A $\beta$  in the patient and thereby therapeutically treating the disease; wherein the agent is (i) A $\beta$  or an immunogenic fragment thereof and the agent is linked to a carrier that helps elicit an immune response to the agent or is administered with an adjuvant that augments an immune response to the agent, or is (ii) an antibody to A $\beta$ .

42. (Previously Presented) The method of claim 41, wherein the agent is A $\beta$  or an immunogenic fragment thereof.

43. (Previously Presented) The method of claim 41, wherein the agent is an antibody to A $\beta$ .

44. (Currently Amended) A method of therapeutically treating a patient suffering from Parkinson's disease, comprising administering to the patient an effective regime of an agent that induces an immunogenic response against alpha-synuclein and an agent that induces an immunogenic response against A $\beta$  in the patient and thereby therapeutically treating the disease; wherein the agent that induces an immunogenic response against alpha-synuclein is alpha synuclein or an immunogenic fragment thereof, and the agent is linked to a carrier that helps elicit an immune response to the agent or is administered with an adjuvant that augments

an immune response to the agent, or an antibody to alpha synuclein, and the agent that induces an immunogenic response against A $\beta$  is A $\beta$  or an immunogenic fragment thereof, or an antibody to A $\beta$ .

45. (Previously Presented) The method of claim 41, wherein the agent is administered peripherally.

46. (Previously Presented) The method of claim 41, wherein the effective regime comprises administering multiple dosages over a period of at least six months.

47. (Canceled)

48. (Previously Presented) The method of claim 41, wherein the patient has a risk factor for the disease.

49-50. (Canceled)

51. (Currently Amended) The method of claim 41, wherein the administering results in improvement in a sign or symptom of Parkinson's disease.

52. (Currently Amended) The method of claim 41, wherein the administering improves motor characteristics of the patient.

53. (Previously Presented) The method of claim 41, further comprising monitoring a sign or symptom of Parkinson's disease in the patient.

54. (Previously Presented) The method of claim 41, wherein the patient is free of Alzheimer's disease.

55. (Previously Presented) The method of claim 54, wherein the patient is free of Alzheimer's disease and has no risk factors thereof.

56-70. (Canceled)

71. (Currently Amended) A method of prophylactically treating a patient having a known genetic risk of Parkinson's disease, the method comprising administering to the patient an effective regime of an agent that induces an immunogenic response against A $\beta$  in the patient and thereby effecting prophylaxis of the disease; wherein the agent is A $\beta$  or an immunogenic fragment thereof, and the agent is linked to a carrier that helps elicit an immune response to the agent or is administered with an adjuvant that augments an immune response to the agent, or is an antibody to A $\beta$ .

72. (Previously Presented) The method of claim 71, wherein the agent is A $\beta$  or an immunogenic fragment thereof.

73. (Previously Presented) The method of claim 71, wherein the agent is an antibody to A $\beta$ .

74. (Currently Amended) A method of prophylactically treating a patient having a known genetic risk of Parkinson's disease ~~in the brain~~, comprising administering to the patient an effective regime of an agent that induces an immunogenic response against alpha-synuclein and an agent that induces an immunogenic response against A $\beta$  in the patient and thereby effecting prophylaxis of the disease; wherein the agent that induces an immunogenic response against alpha-synuclein is alpha synuclein or an immunogenic fragment thereof and the agent is linked to a carrier that helps elicit an immune response to the agent or is administered with an adjuvant that augments an immune response to the agent, or an antibody to alpha synuclein, and the agent that induces an immunogenic response against A $\beta$  is A $\beta$  or an immunogenic fragment thereof and the agent is linked to a carrier that helps elicit an immune response to the agent or is administered with an adjuvant that augments an immune response to the agent, or an antibody to A $\beta$ .

75. (Previously Presented) The method of claim 71, wherein the agent is administered peripherally.

76. (Previously Presented) The method of claim 71, wherein the effective regime comprises administering multiple dosages over a period of at least six months.

77-78. (Canceled)

79. (Previously Presented) The method of claim 71, wherein the patient is free of Alzheimer's disease.

80. (Previously Presented) The method of claim 79, wherein the patient is free of Alzheimer's disease and has no risk factors thereof.

81. (Previously Presented) The method of claim 41, wherein the patient is free of clinical symptoms of a disease characterized by extracellular amyloid deposits.

82. (Previously Presented) The method of claim 45, wherein the patient is free of clinical symptoms of a disease characterized by extracellular amyloid deposits.

83. (Previously Presented) The method of claim 71, wherein the patient is free of clinical symptoms of a disease characterized by extracellular amyloid deposits.

84. (Previously Presented) The method of claim 74, wherein the patient is free of clinical symptoms of a disease characterized by extracellular amyloid deposits.